

**Claim Amendments**

1. (currently amended) A radar apparatus, comprising:

a programmable waveform generator component includes a control component that generates a—complete waveform, wherein the control component employs a plurality of waveform portions to form the waveform; and

one or more modulators coupled to the generator component that receive the waveform from the generator component and transmit a signal with controlled phase and amplitude based on the waveform to an antenna.

2. Canceled.

3. (currently amended) The apparatus of claim 12, wherein the programmable waveform generator component comprises a memory component;

wherein the memory component stores one or more of the plurality of waveform portions;

wherein the control component obtains one or more of the one or more of the plurality of waveform portions from the memory component, wherein the control component combines the one or more of the one or more of the plurality of waveform portions to form the waveform.

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4. (previously presented) The apparatus of claim 3, wherein the memory component comprises a first memory component, wherein the programmable waveform generator component comprises the first memory component and a second memory component;

wherein the second memory component stores one or more instructions, wherein the control component accesses one or more of the one or more instructions from the second memory component, wherein the control component employs the one or more instructions to make a determination of the one or more of the one or more of the plurality of waveform portions to add to the waveform from the first memory component.

5. (previously presented) The apparatus of claim 1, wherein the programmable waveform generator component comprises a signal processor component, wherein the signal processor component corrects one or more distortions in one or more of the phase and the amplitude of one or more of the one or more parts of the waveform.

6. (original) The apparatus of claim 5, wherein the signal processor component corrects the one or more distortions in the one or more of the phase and the amplitude through an application of a multiplication to the one or more of the one or more parts of the waveform.

7. (original) The apparatus of claim 5, wherein the one or more distortions comprise one or more non-linearities of the one or more of the one or more parts of the waveform, wherein the signal processor component corrects the one or more non-linearities through a multiplication of the one or more of the one or more parts of the waveform by a linearization factor.

8. (previously presented) The apparatus of claim 5, wherein the one or more distortions in the one or more of the phase and the amplitude of the one or more of the one or more parts of the waveform comprise a DC offset in the one or more of the phase and the amplitude of the one or more of the one or more parts of the waveform, wherein the programmable waveform generator component creates the DC offset upon an analog to a digital conversion of the one or more of the one or more parts of the waveform;

wherein the signal processor component employs one or more correction factors to promote reduction of the DC offset for correction of the one or more of the one or more parts of the waveform.

9. (original) The apparatus of claim 5, the apparatus further comprising:

one or more filters, wherein one or more of the one or more filters cause the one or more distortions;

wherein the signal processor component detects the one or more distortions, wherein the signal processor component calculates one or more correction factors based on the one or more distortions.

10. (original) The apparatus of claim 9, wherein the signal processor component corrects the one or more distortions through an addition of the one or more correction factors to the one or more of the one or more parts of the waveform.

11. (previously presented) The apparatus of claim 1, the apparatus further comprising:

one or more modulators, wherein the programmable waveform generator component outputs the one or more parts of the waveform to one or more of the one or more modulators;

wherein the one or more of the one or more modulators transmit a signal based on one or more of the one or more parts of the waveform to an antenna.

12. (previously presented) The apparatus of claim 1, wherein the programmable waveform generator component employs one or more of an in-phase signal and a quadrature signal to make a determination of one or more of the phase and the amplitude of the one or more parts of the waveform.

13. (previously presented) The apparatus of claim 1, wherein the programmable waveform generator component comprises an identification friend or foe interrogator.

14. (previously presented) A method for generating a radar signal, comprising the steps of:

generating one or more parts of a waveform by a programmable waveform generator component; and

controlling one or more values of one or more of an in-phase signal and a quadrature signal to generate one or more of the one or more parts of the waveform

wherein the programmable waveform generator component comprises a control component, wherein the step of generating the one or more parts of the waveform by the programmable waveform generator component comprises the steps of:

requesting a plurality of waveform portions at the control component; and

forming the waveform through employment of the plurality of waveform portions.

15. Canceled.

16. (previously presented) The method of claim 14, wherein the programmable waveform generator component comprises a first memory component and a second memory component, wherein the step of requesting the plurality of waveform portions at the control component comprises the steps of:

employing one or more instructions stored at the second memory component to obtain one or more of the plurality of waveform portions from the first memory component;

sending one or more of the one or more of the plurality of waveform portions to the control component from the first memory component; and

connecting the one or more of the one or more of the plurality of waveform portions to form the waveform.

17. (previously presented) The method of claim 14, wherein the programmable waveform generator component comprises a signal processor component, wherein the step of controlling the one or more values of the one or more of the in-phase signal and the quadrature signal to generate the one or more of the one or more parts of the waveform comprises the steps of:

determining one or more correction factors based on one or more distortions of the one or more of the one or more parts of the waveform; and

correcting for one or more of the one or more distortions of the one or more of the one or more parts of the waveform through employment of one or more of the one or more correction factors at the signal processor component.

18. (original) The method of claim 14, wherein the step of controlling the one or more values of the one or more of the in-phase signal and the quadrature signal to generate the one or more of the one or more parts of the waveform comprises the steps of:

making a determination of one or more of a phase and an amplitude of a radio frequency signal through employment of the one or more of the in-phase signal and the quadrature signal of the one or more of the one or more parts of the waveform; and

sending the one or more of the one or more parts of the waveform to a modulator for creation of the radio frequency signal.

19. (previously presented) An article, comprising:

one or more computer-readable signal-bearing media;

means in the one or more media for generating one or more parts of a radar waveform by a programmable waveform generator component; and

means in the one or more media for controlling one or more values of one or more of an in-phase signal and a quadrature signal to generate one or more of the one or more parts of the waveform

wherein the means in the one or more media for generating the one or more parts of the waveform by the programmable waveform generator component comprise:

means in the one or more media for making a determination of one or more of a phase and an amplitude of a radio frequency signal through employment of the one or more of the in-phase signal and the quadrature signal of the one or more of the one or more parts of the waveform; and

means in the one or more media for sending the one or more of the one or more parts of the waveform to a modulator for creation of the radio frequency signal.

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means in the one or more media for generating one or more parts of a radar waveform by a programmable waveform generator component; and

means in the one or more media for controlling one or more values of one or more of an in-phase signal and a quadrature signal to generate one or more of the one or more parts of the waveform.

20. Canceled.